

Purified anti-human TSLP Antibody

Catalog# / Size	515901 / 100 µg
Clone	Poly5159
Regulatory Status	RUO
Other Names	Thymic stromal lymphopoietin (TSLP)
Isotype	Goat Polyclonal Ig
Description	TSLP was initially identified in conditioned medium from a mouse thymic stromal cell line. Human and mouse TSLP are only 43% identical at the amino acid level, and TSLP, like IL-7, exhibits species-specific functions and may function differently in humans and mice. TSLP binds to a heterodimeric receptor constituted by IL-7Ra and TSLPR. TSLPR has low affinity for TSLP, but in combination with IL-7Ra generates a high affinity binding site. TSLP has been associated with the development of allergic disorders in humans, such as asthma, atopic dermatitis, and food allergies. The susceptibility to allergic diseases has been associated to basophil induction by TSLP, and Th2 cytokine production induced by TSLP in mast cells. In addition, TSLP has been associated to the development of Tregs, and blocking TSLPR leads to delayed functional maturation of thymic Tregs. TSLPR has been detected in Tregs from allergic asthmatic patients. TSLP directly activates STAT5 in Tregs and suppresses its suppressive activities; additionally, it inhibits IL-10 production. Human TSLP induces the release of T cell-attracting chemokines (CCL17 and CCL22) from monocytes and enhances the T cell stimulatory capacity of the CD11c ⁺ subset of dendritic cells. TSLP induces proliferation of naïve T cells. In addition, it can drive Th2 differentiation via the induction of IL-4 production, and drives Th2 cytokine-mediated inflammation by acting on bone marrow-resident progenitors, which promotes basophil hematopoiesis. TSLP is upregulated in epithelial cells by IL-1 α , TNF α , and Th2 cytokines.

Product Details

Verified Reactivity	Human
Antibody Type	Polyclonal
Host Species	Goat
Immunogen	Recombinant human TSLP, amino acids Tyr29-Gln159 (Accession# AF338732), was expressed in <i>E.coli</i> .
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. Do not freeze.
Application	ELISA Capture - Quality tested WB - Verified
Recommended Usage	Each lot of this antibody is quality control tested by ELISA assay . For use as an ELISA capture antibody, a concentration range of 0.5-2 µg/ml is recommended. It is recommended that the reagent be titrated for optimal performance. For use in Western blotting, a suggested working concentration of 0.2-1 µg/mL is recommended.
Application Notes	ELISA Capture: The purified Poly5159 antibody is useful as a capture antibody for a sandwich ELISA assay, when used in conjunction with the biotinylated Poly5159 antibody (Cat. No. 515903) as the detecting antibody and recombinant human TSLP (Cat. No. 582409) as the standard. Western blotting: The purified Poly5159 antibody detects recombinant human TSLP protein under reducing conditions.
Application References	1. Volpe E, <i>et al.</i> 2014. <i>J Allergy Clin Immunol.</i> 134:373. PubMed
(PubMed link indicates BioLegend citation)	

Product Citations

1. Volpe E, *et al.* 2014. *J Allergy Clin Immunol.* 134:373. [PubMed](#)

RRID

AB_2561329 (BioLegend Cat. No. 515901)

Antigen Details

Distribution

Epithelial cells, mast cells, basophils, epidermal keratinocytes in atopic dermatitis, synovial fibroblast in arthritis rheumatoid, human airway smooth muscle cells

Function

Induces proliferation of naïve T cells, the release of T cell-attracting chemokines (CCL17 and CCL22) from monocytes, and the T cell stimulatory capacity of CD11c+ subset of dendritic cells; drives Th2 differentiation, drives Th2 cytokine-mediated inflammation to promote basophil hematopoiesis

Interaction

Monocyte, dendritic cells, activated human basophils, activated human T cells, Langerhans cells, B cells, mast cells, activated pulmonary Tregs, NKT cells

Ligand/Receptor

Heterodimeric receptor complex composed of the IL-7 receptor α chain (IL-7R α) and the TSLP receptor (TSLPR or CRLF2)

Cross

Not cross-reactive with recombinant mouse TSLP.

Cell Type

Epithelial cells, Mast cells, Basophils, Fibroblasts

Biology Area

Immunology

Molecular Family

Cytokines/Chemokines

Antigen References

1. Levin SD, *et al.* 1999. *J. Immunol.* 162:677.
2. Reche PA, *et al.* 2001. *J. Immunol.* 167:336.
3. Omori M and Steven Ziegler. 2007. *J. Immunol.* 178:1396.
4. Rochman I, *et al.* 2007. *J. Immunol.* 178:6720.
5. Mazzuchelli R, *et al.* 2008. *Blood* 112:3283.
6. Siracusa MC, *et al.* 2011. *Nature* 477:229.
7. Nguyen KD, *et al.* 2010. *Allergy Asthma Clin. Immunol.* 6:4.

Gene ID

[85480](#)

Related Protocols

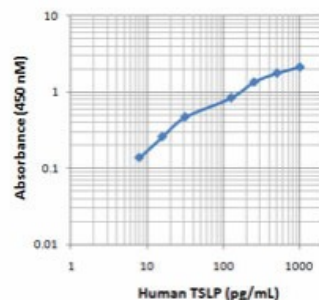
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[Sandwich ELISA Protocol](#)

Other Formats

Purified anti-human TSLP, Biotin anti-human TSLP

Product Data



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